Application No.: 10/582,885 Amendment under 37 C.F.R. §1.111
Art Unit: 3734 Attorney Docket No.: 062670

AMENDMENTS TO THE SPECIFICATION

Page 3

Please amend the paragraph beginning on line 9 to read as follows:

DISCLOSURE OF THE INVENTION

PROBLEMS TO BE SOLVED BY THE INVENTION

[0005]

A conventional manipulator with multiple degrees of freedom employs wire as a drive power transmitting means from a drive unit. Bending of an articulation and opening/closing of the gripping portion are achieved by winding up wire with a drive unit.

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Please amend the paragraph beginning on line 9 to read as follows:

[0009]

Third, there is a problem that wire is difficult to sterilize and clean. Thus, in the conventional manipulator with multiple degrees of freedom, its sterilization and cleaning before and after surgery are very complicated.

SUMMARY OF THE INVENTION

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Please amend the paragraph beginning on line 2 to read as follows:

MEANS FOR SOLVING THE PROBLEM

[0013]

The present invention concerns a manipulator with multiple degrees of freedom which is driven by a driving means. More particularly, it concerns a manipulator with multiple degrees of freedom used for minimally invasive surgery such as abdominal cavity surgery. As the driving means, a drive unit including a reciprocatory output axis, for example, an actuator may be used.

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Please amend the paragraph beginning on line 9 to read as follows:

EFFECTS OF THE INVENTION

[0031]

The present invention enables the durability and control accuracy to be raised by employing a link mechanism as a drive power transmitting means. Further, the present invention facilitates sterilization, cleaning and attachment/detachment to/from a driving means.

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After line 16, please add the following new paragraphs:

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a diagram showing a bending forceps system including a manipulator with multiple degrees of freedom (bending forceps) according to an implementation of the present invention.

- FIG. 2 is a perspective view of the front end portion of the bending forceps.
- FIG. 3 is a top view of the front end portion of the bending forceps.
- FIG. 4 is a side view of the front end portion of the bending forceps.
- FIG. 5 is a diagram showing an action of a first link mechanism.
- FIG. 6 is a diagram showing an action of the first link mechanism.
- FIG. 7 is a diagram showing an action of a third link mechanism.

Please amend the paragraph beginning on line 17 to read as follows:

BEST MODE FOR CARRYING OUT THE INVENTION DETAILED DESCRIPTON OF THE

PREFERRED EMBODIMENTS

[0032]

Hereinafter, preferred embodiments (implementations) of the present invention will be described in detail by way of example with reference to accompanying drawings.

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Beginning on line 22, please delete the following paragraphs:

BRIEF DESCRIPTION OF THE DRAWINGS

[8600]

[FIG. 1] FIG. 1 is a diagram showing a bending forceps system including a manipulator with multiple degrees of freedom (bending forceps) according to an implementation of the present invention.

[FIG. 2] FIG. 2 is a perspective view of the front end portion of the bending forceps.

[FIG. 3] FIG. 3 is a top view of the front end portion of the bending forceps.

[FIG. 4] FIG. 4 is a side view of the front end portion of the bending forceps.

[FIG. 5] FIG. 5 is a diagram showing an action of a first link mechanism.

[FIG. 6] FIG. 6 is a diagram showing an action of the first link mechanism.

[FIG. 7] FIG. 7 is a diagram showing an action of a third link mechanism.